



## IP<sup>7</sup> Frequently Asked Questions™

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#### What is IP<sup>7</sup>?

The IP<sup>7</sup> Product Line is a suite of products created to address the needs of the converging network. The product line delivers seamless SS7 to IP connectivity and features to allow carriers and service providers the capability to link the Switched Circuit Network (SCN) and IP networks. The suite of products include the IP<sup>7</sup> Secure Gateway, IP<sup>7</sup> Edge, the IP<sup>7</sup> NP database, and IP<sup>7</sup> Sentinel. This FAQ addresses the IP<sup>7</sup> Secure Gateway.

## What is the Secure Gateway?

The IP<sup>7</sup> Secure Gateway is a Signaling Gateway, which provides SS7 signaling over an IP network. It is a high capacity SS7 and IP signaling platform built on a proven carrier grade platform. As the core component of next generation signaling networks, it provides all traditional interfaces to the switched circuit network, and a TCP/IP interface to packet networks.

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## What is the platform and capacity?

The platform is the same used by the EAGLE STP. It is a proven hardware platform, with more than 200 pair deployed throughout the world. The platform is fully distributed with no central CPU. Each application processor contains all data and translation information required to route messages to the SS7 and IP network. Application processors are available for 56K SS7 links, high speed SS7 links, X.25, databases such as Local Number Portability, and an IP network interface. The network interface cards are called Data Communication Modules (DCM).

The Secure Gateway can interface up to 450 SS7 links on the switched circuit network, and provide 2 million Busy Hour Call Attempts (BHCA) via a single pair of 100baseT network interface cards over an IP network. Multiple pairs of DCMs can be added to increase the IP signaling capacity to over 20 million BHCA.

#### Where is it used?

- 1. SS7 signaling for Internet Dial Access or Internet Offload solutions.
- SS7 signaling for Packet based Broadband switches and Voice over Packet (VoIP, VoATM) applications.
- 3. IP enabled Intelligent Network (IN) services. The IP<sup>7</sup> Secure Gateway can also operate as a fully functional STP including Global Title Translations, Gateway Screening, and integration Local Number Portability (LNP).

## So, if I need call control to my Remote Access Servers or Voice over Packet Gateways, the Secure Gateway can provide it?

Yes. TALI provides ISUP signaling to RAS/RAS Controllers, Media Gateway Controllers(MGC), Voice over Packet Gateways, and Broadband or Next Generation Switching systems.

# Does each MGC or RAS Controller need its own point code?

No. Multiple devices can be controlled by a single pair of Secure Gateways, and can appear as a single Point Code to the SCN. Routing to the IP device is based on the originating office's point code, the destination point code, and the Circuit Identification Code (CIC). This allows support of 1million dial offload ports under a single point code. Future releases will provide 20 million BHCA, which would support 5 million dial offload ports, and 500,000 Voice over Packet ports all under a single Point Code.

## What is the Secure Gateway's protocol interface on

#### the IP network?

The interface to the IP network is via the Transport Adapter Layer Interface (TALI). TALI provides transport of SCCP/TCAP, ISUP, and MTP data over TCP/IP. TALI is available as an interface to Service Control Points (SCP), Media Gateway Controllers (MGC), Virtual Switching Offices, and other IP enabled devices requiring signaling over an IP network.

#### What about standards?

Our SS7 interfaces are Bellcore compliant. Our TALI interface runs over a standard TCP/IP stack. There is currently no standard for the Signaling Gateway IP interface, therefore Tekelec developed TALI. Tekelec also can provide a TALI API for implementation on UNIX based systems to speed development of the interface. As standards are developed, Tekelec is committed to adopting them.

## Who do you interoperate with today?

Tekelec has completed interoperability testing with Alcatel's HLR, and is in the process of interoperability testing with Telcordia's ISCP. We are also in the process of testing with several other major network equipment vendors for Internet Dial Access and Voice over Packet.

Our first application is at USWest Wireless, where we provide an IP interface to HLRs. This network will be carrying live traffic in 3Q99.

#### Whose SS7 stack do you use?

We do not use a third party SS7 stack. The SS7 stack is written and maintained by Tekelec, and has been in service since 1991.

### What about reliability in the IP network?

The Secure Gateway is typically deployed in pairs with redundant DCMs. This allows signaling traffic to be carried over 4 separate networks. TALI also provides additional reliability mechanisms such as link fault recovery and periodic test messages to ensure integrity of the IP network.

## Can I upgrade my existing EAGLE STP to a Secure Gateway?

Yes. Upgrading an STP to a Secure Gateway requires a new software load, and the addition of the DCM modules.

#### When is it available?

The Secure Gateway is available now.

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